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Docket No.: A-3089

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MAIL STOP: APPEAL BRIEF-PATENTS

By: _____ Date: December 15, 2003

Before the Board of Patent Appeals and Interferences
IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applic. No.	:	10/034,915
Inventor	:	Martin Mayer et al.
Filed	:	November 21, 2001
TC/A.U.	:	2854
Examiner	:	Hoai-An D. Nguyen
Docket No.	:	A-3089
Customer No.	:	24131

Hon. Commissioner for Patents
Alexandria, VA 22313-1450

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BRIEF ON APPEAL

S i r :

This is an appeal from the final rejection in the Office action dated July 14, 2003, finally rejecting claims 1-4.

Appellants submit this *Brief on Appeal* in triplicate, including payment in the amount of $330.00 to cover the fee for filing the *Brief on Appeal*.

Real Party in Interest:

This application is assigned to Heidelberger Druckmaschinen AG of Heidelberg, Germany. The assignment will be submitted for recordation upon the termination of this appeal.

Related Appeals and Interferences:

No related appeals or interference proceedings are currently pending which would directly affect or be directly affected by or have a bearing on the Board's decision in this appeal.

Status of Claims:

Claims 1-4 are rejected and are under appeal. No claims were cancelled.

Status of Amendments:

No claims were amended after the final Office action. *A Notice of Appeal* was submitted on October 10, 2003.

Summary of the Invention:

As stated in the first paragraph on page 1 of the specification of the instant application, the invention relates to a method for presetting an ink feed in multi-color printing.

Appellants explained on page 7 of the specification, line 17, that, referring to the figures of the drawings in detail and first, particularly, to Fig. 1 thereof, there is shown a ductor-type inking system of an offset printing press including an ink duct or ink fountain 1 in which printing ink 2 is stored. An ink duct roller 3 dips into the printing ink 2, and a motor M indicated by reference numeral 4 drives the ink duct roller 3 in the direction of the arrow 5. In the bottom area of the ink duct 1, a row of ink duct blades 6 is provided, which are disposed in zones and which are spaced at small distances from one another over the width of the ink duct roller 3. Each ink duct blade 6 is linked to an adjustment cylinder or actuation cylinder 7, with which the distance of an ink duct blade 6 to the outer surface of the ink duct roller 3 can be adjusted. The bigger the distance, the more printing ink 2 is taken away by the ink duct roller 3. Furthermore, the inking system includes an ink vibrator or vibrating ink roller 8. The ink vibrator 8 executes a swiveling movement 9 between the ink duct roller 3 and a driven distributor roller 10.

Appellants outlined on page 8 of the specification, line 11, that a row of ink transfer rollers 11-16 and plate inking rollers 17-20 are provided downstream from the distributor roller 10. The plate inking rollers 17-20 are in rolling

contact with the ink transfer rollers 14, 16 and a printing form cylinder 21. The ink transfer rollers 12, 14, 16 that are shown with an arrow and the printing form cylinder 21 are driven via a gear train, while all the other ink transfer rollers 11, 13, 15 and the ink transfer rollers 17-21 are driven by friction with the neighboring rollers. A control device 22 is connected to adjustment cylinders 7 and the motor 4. The control device 22 has input location 23, 24, 25 for data concerning the weight per unit area G, the specific weight γ and for the area coverage FD_z. The zonal area coverage values FD_z are supplied by a plate scanning device 26.

It is stated on page 9 of the specification, line 1, that the method according to the invention is described with reference to the flow chart shown in Fig. 2. According to an exemplary embodiment, a printed image with the four process inks or base inks C, M, Y, B and a special ink S is to be created. Corresponding to an ink recipe, in step 27, the process inks C, M, Y, B and the special inks S1, S2, S3 are mixed with a computer-controlled ink mixing system. With the mixed ink S_M, in a step 28, a test print of a full tone area is created, which is measured spectrally in a step 29. In a step 30 it is examined, if the mixed ink S_M shows a desired color value. If the mixed ink S_M does not correspond to the set point S, then

the steps 27-29 are repeated. If the mixed ink S_M corresponds to the set point S, then in a step 31 it is checked, if the weight per unit area G of the mixed ink S_M is already known. The weight per unit area G corresponds to the mass of the printing ink 2 per unit area on the test print. If the weight per unit area G is not known, then it is determined in a subsequent step 32. In a separately performed step 33, the medium area coverage FD_M and the zonal area coverage FD_Z for the printing plate are determined, with which the mixed ink S is to be printed. From the values for the medium area coverage FD_M and the weight per unit area G, in steps 34, 35, the needed amount of ink is calculated and mixed. If the result from step 31 is, that the weight per unit area G is already known, then one can directly go to the calculations of steps 34, 35. The mixed ink S is supplied to the ink duct 1. From the values for the area coverage FD_Z in the individual ink zones and from the weight per unit area G, the presetting values for the ink duct blade 6 and the revolutions per minute of the ink duct roller 3 are calculated and adjusted in steps 36, 37, with a known specific weight of the printing ink 2. If the presettings for all separated inks C, M, B, Y, S is taken care of, then in the last step 38 the production run can be started.

As explained on page 10 of the specification, line 10, the calculation step 36 can be executed by use of a three-dimensional field of characteristic curves, like it is shown in Fig. 3. By using the field of characteristic curves, when there is a given ink duct lift or stroke and respectively an ink stripe of e.g. 70 %, the ink zone opening FZ of the ink duct blade 2 for the special ink S in question can be calculated in dependence from the zonal area coverage value FD_Z and the ink film thickness of the printing ink 2 in the printed image. The ink zone opening for an ink duct blade 6 results from the following relation:

$$FZ = G\ (a_0 + a_1 * (FD_Z / b_F) + a_2 * B)$$

Where G is the weight per unit area, FD_Z is the zonal area coverage value, b_F is the width of the strip that has been taken over by the ink duct roller 3 via the ink vibrator 8, B is a quantity that characterizes the print material or substrate, like for example constants for different paper grades, like art paper, matt paper or uncoated paper and a_0, a_1, a_2 are correction factors. The correction factors a_0, a_1, a_2 result for example from influencing variables such as length of the inking unit, rheological characteristics of the ink and configuration of the ink duct.

Appellants outlined on page 11 of the specification, line 8, that through the use of the ink duct blades 6, which are preset via the adjustment cylinders 7, and the periodic activation of the feed of the ink duct roller 3 with the motor 4, the ink vibrator 8 takes over the printing ink 2 from the ink duct roller 3. The ink transfer from the ink duct roller 3 over the ink vibrator 8 and the remaining rollers 10-20 is done by ink splitting. The presetting ensures that the time until the produced prints have a desired quality is minimized.

It is outlined in the last paragraph on page 11 of the specification, starting at line 17, that, starting with the presetting values, the ink duct blades 6 and the rotational speed or the feed of the ink duct roller 3 are continuously adjusted anew within the limits of the control of the inking process.

References Cited:

U.S. Patent No. 4,200,932 (Schramm et al.), dated April 29, 1980;

U.S. Patent No. 5,031,535 (Kipphan et al.), dated July 16, 1991;

U.S. Patent No. 5,170,711 (Maier et al.), dated December 15, 1992.

U.S. Patent No. 6,041,708 (Kipphan et al.), dated March 28, 2000;

Issues

1. Whether or not claims 1 and 2 are obvious over Kipphan et al. (U.S. Patent No. 5,031,535; hereinafter "Kipphan") in view of Schramm et al. (U.S. Patent No. 4,200,932) (hereinafter "Schramm") under 35 U.S.C. §103.

2. Whether or not claim 3 is obvious over Kipphan in view of Schramm and in further view of Kipphan et al. (U.S. Patent No. 6,041,708; hereinafter "Kipphan II") under 35 U.S.C. §103.

3. Whether or not claim 4 is obvious over Kipphan in view of Schramm and in further view of Maier et al. (U.S. Patent No. 5,170,711) under 35 U.S.C. §103.

Grouping of Claims:

Claim 1 is independent. Claims 2-4 depend on claim 1 . The patentability of claims 2-4 are all separately argued. Therefore, claims 2-4 do not stand or fall with claim 1.

Arguments:

Before discussing the prior art in detail, it is believed that a brief review of the invention as claimed, would be helpful.

Claim 1 calls for, *inter alia*:

> deriving presetting values for zonal ink metering devices and for ink metering rollers acting over a printing width from a set value for a weight per unit area of a full tone area.

It is noted that the corporate assignee of the Kipphan and the Kipphan II references is also the corporate assignee of the instant application, and therefore, appellants are very familiar with these references.

1. Claims 1 and 2 are not obvious over Kipphan in view of Schramm:

The Examiner correctly stated in the first paragraph of page 3 of the Office action, that Kipphan does not teach a derivation of presetting values for zonal ink metering

devices and for ink metering rollers acting over a printing width from a set value for a weight per unit area of a full tone area.

The Examiner's comments on page 3 of the Office action, that Schramm discloses deriving presetting values for zonal ink metering devices and for an ink metering roller acting over a printing width, from a set value for a weight per unit area (density) of a full tone area, are not accurate.

The Examiner has incorrectly interpreted how the term "weight per unit area" in claim 1 of the instant application is to be understood. It is explicitly stated in the specification of the instant application, that the weight per unit area is determined as the amount of ink per printed full tone area or solid ink area (page 4, lines 15-16) and that the weight per unit area G corresponds to the mass of the printing ink 2 per unit area of the test print (page 9, lines 15-16). Based on this, it is clear that "weight" is defined in its ordinary sense related to gravitational forces. In other words, weight relates to a force that has units of Newtons (N). Therefore, "weight per unit area" as recited in claim 1 of the instant application, is a quantity with the units of Newtons per square meter (N/m^2).

The Schramm reference discloses a color density. Density is a measure for opacity or attenuation. The color density does not have the units of N/m^2 and therefore cannot be identified as "weight per unit area", as the Examiner incorrectly has done. Furthermore, a person of ordinary skill in the art cannot find any teaching in Schramm that starting from color density, the "weight per unit area" can be inferred. There is no technical teaching in Schramm pertaining to the mass or weight of the printing ink.

Therefore, the Schramm reference does not show **deriving presetting values** for zonal ink metering devices and for ink metering rollers acting over a printing width, from a set value for a **weight per unit area of a full tone area**, as recited in claim 1 of the instant application.

It is a requirement for a *prima facie* case of obviousness, that the prior art references must teach or suggest **all** the claim limitations.

The Kipphan and Schramm do not show or suggest **deriving presetting values** for zonal ink metering devices and for ink metering rollers acting over a printing width from a set value for **a weight per unit area of a full tone area**, as recited in claim 1 of the instant application.

The references applied by the Examiner **do not** teach or suggest all the claim limitations. Therefore, the Examiner has not established a *prima facie* case of obviousness.

It is well settled that almost all claimed inventions are but novel combinations of old features. The courts have held in this context, however, that when "it is necessary to select elements of various teachings in order to form the claimed invention, we ascertain whether there is any suggestion or motivation **in the prior art** to make the selection made by the applicant". Interconnect Planning Corp. v. Feil, 227 USPQ 543, 551 (Fed. Cir. 1985) (emphasis added). "Obviousness can not be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching, suggestion or incentive supporting the combination". In re Bond, 15 USPQ2d 1566, 1568 (Fed. Cir. 1990). "Under Section 103 teachings of references can be combined **only** if there is some suggestion or incentive to do so." ACS Hospital Systems, Inc. v. Montefiore Hospital et al., 221 USPQ 929, 933, 732 F.2d 1572 (Fed. Cir. 1984) (emphasis original). "Although a reference need not expressly teach that the disclosure contained therein should be combined with another, the showing of combinability, in whatever form, must nevertheless be '**clear and particular.**'" Winner Int'l

Royalty Corp. v. Wang, 53 USPQ2d 1580, 1587, 202 F.3d 1340 (Fed. Cir. 2000) (emphasis added; citations omitted); Brown & Williamson Tobacco Corp. v. Philip Morris, Inc., 56 USPQ2d 1456, 1459 (Fed. Cir. Oct. 17, 2000). Appellants believe that there is no "clear and particular" teaching or suggestion in Kipphan to incorporate the features of Schramm, and there is no teaching or suggestion in Schramm to incorporate the features of Kipphan.

In establishing a *prima facie* case of obviousness, it is incumbent upon the Examiner to provide a reason why one of ordinary skill in the art would have been led to modify a prior art reference or to combine reference teachings to arrive at the claimed invention. Ex parte Clapp, 227 USPQ 972, 973 (Bd. Pat. App. & Int. 1985). To this end, the requisite motivation must stem from some teaching, suggestion, or inference in the prior art as a whole or from the knowledge generally available to one of ordinary skill in the art and not from the appellant's disclosure. See, for example, Uniroyal, Inc. v. Rudkin-Wiley Corp., 837 F.2d 1044, 1052, 5 USPQ2d 1434, 1439 (Fed. Cir. 1988), *cert. den.*, 488 U.S. 825 (1988). The Examiner has not provided the requisite reason why one of ordinary skill in the art would have been led to modify Kipphan or Schramm or to combine Kipphan's and Schramm's teachings to arrive at the claimed present

invention. Further, the Examiner has not shown the requisite motivation from some teaching, suggestion, or inference in Kipphan or Schramm or from knowledge available to those skilled in the art.

Appellants respectfully believe that any teaching, suggestion, or incentive possibly derived from the prior art is only present with hindsight judgment in view of the instant application. "It is impermissible, however, simply to engage in a hindsight reconstruction of the claimed invention, using the applicant's structure as a template and selecting elements from references to fill the gaps. . . . The references **themselves** must provide some teaching whereby the applicant's combination would have been obvious." In re Gorman, 18 USPQ2d 1885, 1888 (Fed. Cir. 1991) (emphasis added). Here, no such teaching is present in the cited references.

Appellants comment as follows with respect to the Examiner's response to arguments on pages 5-6 of the final Office action dated July 14, 2003.

The Examiner correctly stated in item 6 of the Response to Arguments, that as disclosed in Schramm, the "**color density does not have the units of N/m^2 and cannot be identified as**

'weight per unit area'" (emphasis added by appellants). However, the Examiner argues without any support from Schramm that the technical teaching pertains to the mass or weight of the printing ink. The Examiner only refers to his belief of what a person of ordinary skill in the art would have to do to reach a desired color density. The Examiner believes that color density is controlled via the ink density of the individual inks, and uses a third document (see page 6 of the final Office action) Dilling (U.S. Patent No. 6,230,622) in order to vaguely support his arguments. However, like Schramm, Dilling also relates to ink densities and furthermore, like Schramm, Dilling does not address the weight or mass of the ink per unit area. Moreover, like Schramm, Dilling is related to regulating or controlling the ink, and not to presetting the ink as is disclosed in the instant application. Therefore, the Examiner's arguments are not accurate.

Since claim 1 is believed to be allowable, dependent claim 2 is believed to be allowable as well.

2. Claim 3 is not obvious over Kipphan in view of Schramm and Kipphan II:

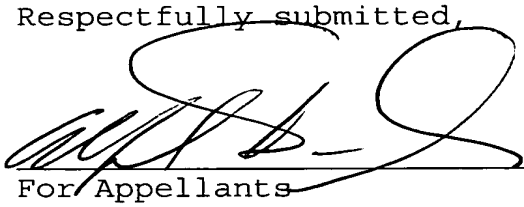
The arguments related to issue 1 are hereby incorporated by reference in their entirety because they are equally applicable to claim 3. Additionally, Kipphan II does not make up for the deficiencies of Kipphan and Schramm. Therefore, claim 3 is allowable independently and also because claim 3 dependent on claim 1.

3. Claim 4 is not obvious over Kipphan in view of Schramm and Maier et al.:

The arguments related to issue 1 are hereby incorporated by reference in their entirety because they are equally applicable to claim 4. Additionally, Maier et al. do not make up for the deficiencies of Kipphan and Schramm. Therefore, claim 4 is allowable independently and also because claim 4 dependent on claim 1.

Based on the above-given arguments, the honorable Board is therefore respectfully urged to reverse the final rejection of the Primary Examiner.

Respectfully submitted,



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